

ICT Strategy in the Macedonian justice system	Date: 22.11.2006
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Version: 1.2 **Author:** Zoran Janevski

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Comments:

■

Distribution List:

1. N. Memov
2. B. Jasari
3. F. Stojanovski
4. Z. Janevski

Available to:

All the members of the Steering Board of the LDBIS/JIS Project, as well as all interested parties that are active stakeholders and users of the benefits of the ICT Strategy in the Macedonian Justice System.

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1 Introduction

1.1 WHAT THIS DOCUMENT REPRESENTS

This document represents the intentions of the Ministry of Justice (MJ) and the other institutions stakeholders of the justice system (JS) in the Republic of Macedonia regarding the application of the information and communication technology in the period of 2007–2010.

The method that was used in the determining of the strategic development goals of JS is a method of comparing the current condition and the future needs and perspectives, evaluating the positive aspects (strong sides), and especially the negative ones (weaknesses) in the context of the future development (possibilities) and possible threats. The method of SWOT analysis was also used during the process of preparation of “Strategy for Reform of the Justice System”, adopted by the government in November 2004, as well as during the establishment of the National Strategy and Action Plan for Development of the Information Society” of the Republic of Macedonia, passed in June 2005, that was also largely used as base for this Strategy.

The compliance with the principles, methods, activities and measures presented in this document should help the more efficient use of ICT in the Macedonian justice system and should support the process of its reform.

This strategy is not an initial effort of the justice system in Macedonia to systemize the process of increasing the efficiency through intensive application of ICT. On the contrary, this document is based on all the previous studies prepared by the Government of the Republic of Macedonia, Ministry of Justice, the Supreme Court and etc, as well as from consultations, technical assistance and reports realized through the cooperation with the World Bank, European Union, USAID and other international organizations. It takes into consideration all the results so far in the field of modernization and automation of the processes that take place in the justice system institutions and it starts from the current level of interoperability and functional connection, which is in fact the starting point for all the future development activities. Further more, this strategy, having in mind the present situation, the needs and realistic possibilities, is facing towards the future and the methods how to get there.

1.2 OBJECTIVES OF THE DOCUMENT

The main objective of this Strategy is to direct the process of introduction of ICT in the justice system in Macedonia so that it can function more efficiently. In order to be able to achieve that, the strategy contains an analysis of the current ICT situation in the justice system, the future ICT needs have been identified, as well as the resources and activities necessary to realize these needs in the line of modernization and automation of the Macedonian justice system. The main objectives that need to be achieved with the realization of this strategy are:

1. Increasing the efficiency of the justice system
2. Increasing the transparency of the justice system
3. Improvement of the protection and security of data
4. Support in the fight against corruption
5. Support in the efficient human and material resource management in the justice system

In order to be able to realize the main objectives of this strategy, this document contains short-term and mid-term projects and covers the following aspects, important for a modern and efficient working environment in the Macedonian justice system:

- Communications
- Interoperability
- Creation and exchange of information
- Development of applicative solutions
- ICT infrastructure

With the realization of the activities listed in this Strategy the justice system will gain the following benefits:

- a. Improvement of the quality of the decisions of the justice system bodies and decrease of the duration of the procedures
- b. Providing access to the public information regarding the court practice
- c. Standardization of the procedures., processes, nomenclatures on system level as a whole
- d. Gradually eliminating of the data storage on paper through replacement of paper documents with electronic forms of data files.
- e. Quick access to the legislation, court practice.

1.3 PURPOSE OF THE DOCUMENT

This strategy is intended for several types of users. Basically its purpose is to be a type of a guidebook and to give direction for activities of decision makers in the Macedonian justice system, as well to those that work in the ICT field in the justice system. The objectives of this group of users is to put the cornerstone of the direct specific measures and activities, such as: projects, programmes and initiatives from the field of application of ICT according to the priorities determined by the needs that are constantly increasing in the reform process of the Macedonian justice system.

The second group of users are the official persons from the institutions in the Republic of Macedonia that have a role in the process of acquiring a status of full-fledged member of the Republic of Macedonia in the European Union and NATO. With the signing of the Stabilization and Association Agreement with the European Union in March 2004, the declaration of obligatory standards in respect of the functioning of the democratic institutions and the legal state part of the Copenhagen Criteria for EU membership, as well as with the obtaining the status of the Republic of Macedonia of an EU candidate country in December 2005, this Strategy will help for further harmonization of the Macedonian justice system with the one of EU from the aspect of application of ICT. For that purpose, this document takes into consideration the strategic documents of the European Union for ICT, such as the new Strategy for development of the information society and application of ICT in EU, entitled as i2010 - A European Information Society for growth and employment", published by the European Commission on June 1, 2005 and others.

The third group of users are the international developmental agencies and other institutions that in their future plans have entered the support of the reform process of the Macedonian justice system, especially those that plan this technical and/or financial help in the field of support of intensive application of ICT in all fields of the Macedonian justice system.

2 About the Justice System of RM

2.1 ORGANIZATION OF THE JUSTICE SYSTEM OF RM

The justice system of the Republic of Macedonia consists of the following stakeholders:

- Ministry of Justice (MOJ),
- Courts,
- Judicial Council of the Republic of Macedonia (JCRM),
- Public Prosecution (PP),
- Penitentiary System (PS),
- Bar,
- Public Notaries, and
- Enforcement Agents (EA).

The Ministry of Justice performs the activities that refer to:

- Judiciary, public prosecution, public attorney office;
- State administration;
- Criminal responsibility and misdemeanor responsibility;
- notary activities, bar activities and other types of legal aid;
- inheritance, ownership, real rights and obligation relations;
- international legal help;
- enforcement of sanctions for criminal acts and misdemeanors;
- organization and management with the penal-correctional and educational-correctional institutions;
- amnesty and pardoning;
- court expert testimonies, expertise reports and super-expert testimonies;
- election system, maintaining evidence on the election right;
- criminal, misdemeanor, civil, non-trial, enforcement and administrative procedure;
- administrative supervision;
- performing the activities that do not fall under the jurisdiction of another body of the state administration; and
- performing other activities determined with law.

The court system consists of the courts that are autonomous and independent and adjudicate on the basis of the Constitution and the laws and on the basis of the international agreements ratified in accordance with the Constitution. It covers 27 basic courts, 4 appellate courts, the Administrative Court and the Supreme Court of the Republic of Macedonia.

In the court system in the Republic of Macedonia currently the judicial power is performed by 632 judges. Out of them 24 are judges in the Supreme Court, 83 in the appellate courts and 525 in the basic courts. In all courts there are also 2127 clerks employed, out of which 31 secretaries; 644 independent

court advisers, court advisers, judges assistants and interns; 642 minute takers and other 650 employees (archive clerks, couriers, as well as 160 members of the court police).¹

The Judicial Council of the Republic of Macedonia is autonomous and independent body of the judiciary that secures and guarantees the independency of the judicial branch. It is composed of fifteen members out of which eight are elected by the judges from among their ranks three are elected by the Assembly of the Republic of Macedonia, two are elected by the Assembly upon proposal by the President of the Republic of Macedonia, and according to the function its members are the President of the Supreme Court of the Republic of Macedonia and the Minister of Justice.

The jurisdictions of the Judicial Council of the Republic of Macedonia are: election and dismissal of judges and lay judges; determining the ceasing of a judicial function; election and dismissal of presidents of courts; following and assessment of the work of the judges and etc.

According to Article 106 from the Constitution: "Public Prosecution is single and independent state body which persecutes the perpetrators of criminal acts and other punishable acts determined with law and also performs other activities determined with law.

The public Prosecution of the Republic of Macedonia is organized on the basis of the principles of hierarchy and subordination.

In accordance with the Law on Public Prosecution, the Public Prosecution is organized on three levels such as:

- The Public Prosecution of the Republic of Macedonia (Public Prosecutor and his deputies - 10) act in procedures upon extraordinary legal remedies in front of the Supreme Court of the Republic of Macedonia. Within the framework of the Public Prosecution of the Republic of Macedonia there are 3 departments: Civil, Criminal and Department for International cooperation;
- The Higher Public Prosecutions in Skopje, Stip and Bitola that act in procedures upon appeal in front of the appropriate Appellate courts in Skopje, Stip and Bitola, where the prosecution function is performed by 3 higher Public Prosecutors and 24 Deputy Public Prosecutors;
- There are 22 Basic Public Prosecutors that act in first instance procedure in front of the appropriate Basic Courts in the Republic of Macedonia, and they have 22 basic public prosecutors and 132 deputies.

Total, in the Public Prosecution are employed 174 civil servants and other administrative staff, out of which 56 are

¹ Government of the Republic of Macedonia, *Answers to the Questionnaire of the European Commission*, "Chapter I- Political criteria", Skopje, 2005, p. 134-135.

associates, 54 are minute takers, and 66 are administrative staff.

The penitentiary system in the Republic of Macedonia according to the Law on Enforcement of Sanctions is composed of the Department for enforcement of Sanctions in the composition of the Ministry of Justice and the penal - correctional institutions.

2.2 CURRENT CONDITION OF ICT IN THE JUSTICE SYSTEM

In the period starting from 2000, with the technical and financial support of donors, such as the European Commission, World Bank, USAID and others, the justice system in Macedonia started to get modernized and automation was introduced by the development and implementation of ICT solutions and systems. This has to cause significant improvement of the efficiency of the judiciary and the justice system as a whole. But, still, great deal of these ICT systems have not been accepted so far by the judges and administrative workers, to be inbuilt and integrated in their daily work.

That is the condition also with the application software for the misdemeanor procedure, which is differently accepted and put into function in certain number of courts, but there are courts that still do not use this application.

The court information system (SIS) which is designed and implemented within the framework of the PHARE programme, in several phases, is still not used in all the courts, except in Basic Court Skopje 1, Appellate Court in Skopje and the Supreme Court of the Republic of Macedonia. This is due primarily to the fact that at the beginning of the development of this system, it was designed as a replica of the existing manual system of work of the courts, without making a reengineering of the processes and without adjusting them to use the benefits from their automation. Also, the development phases of the application so far, planned only development of the basic application with basic functionality.

SIS in its form so far is facing with several drawbacks that need to be removed:

1. The users interface is not sufficiently intuitive so the users have great deal of difficulties to learn how to work with the application and it is necessary to have long and extensive training for them.
2. Although SIS contains the summary of a court decision, it is not positioned as a central part of the application, as it is the practice for these types of case management systems.

3. The training during the implementation of SIS was not sufficient, so that the courts are not in a position to start using it effectively and efficiently.
4. Central keeping and management of data is missing, so it is not possible to upload or download the data from a central server.
5. SIS does not have available a big number of detailed reports necessary for the management of the courts and necessary so that the Ministry of Justice can be able to quantify and measure the efficiency of individual courts and judges.

Very important factor in the important improvement of the conditions in the justice system is the engagement of **new ICT staff** in all justice system institutions in the Republic of Macedonia which together with the undertaking of the **unique joint strategy for ICT in the justice system** and providing of qualitative **financial means** and **technical assistance** are the four main principles for successful realization of the process of computerization and automation.

2.3 ORGANIZATION OF ICT IN THE JUSTICE SYSTEM OF RM

2.3.1 Current Condition

According to Article 99 from the Law on Courts (Official Gazette of R. Macedonia no. 58/06 dated 11.05.2006) the court information technology system is under the jurisdiction of the IT Center of the Supreme Court, while the other courts should have their own services for information technology, as separate organizational units. The IT center of the Supreme Court has 3 employees.

On the other hand, in the Ministry of Justice, a unique IT Center with data base for all the justice system bodies is being established. Also, the Ministry of Justice provides positioning, maintaining and functioning of the court IT system based on the unique methodological and technological base.

According to the "Regulation for changes and amendments of the Regulation for internal organization of the Ministry of Justice" passed in March 2006, within the framework of MOJ it is defined that "the Sector for information and communication technology performs activities from the field of work of the Ministry that are related to the information technology". The activities in the Sector (ICT Center for the justice system) will be performed through:

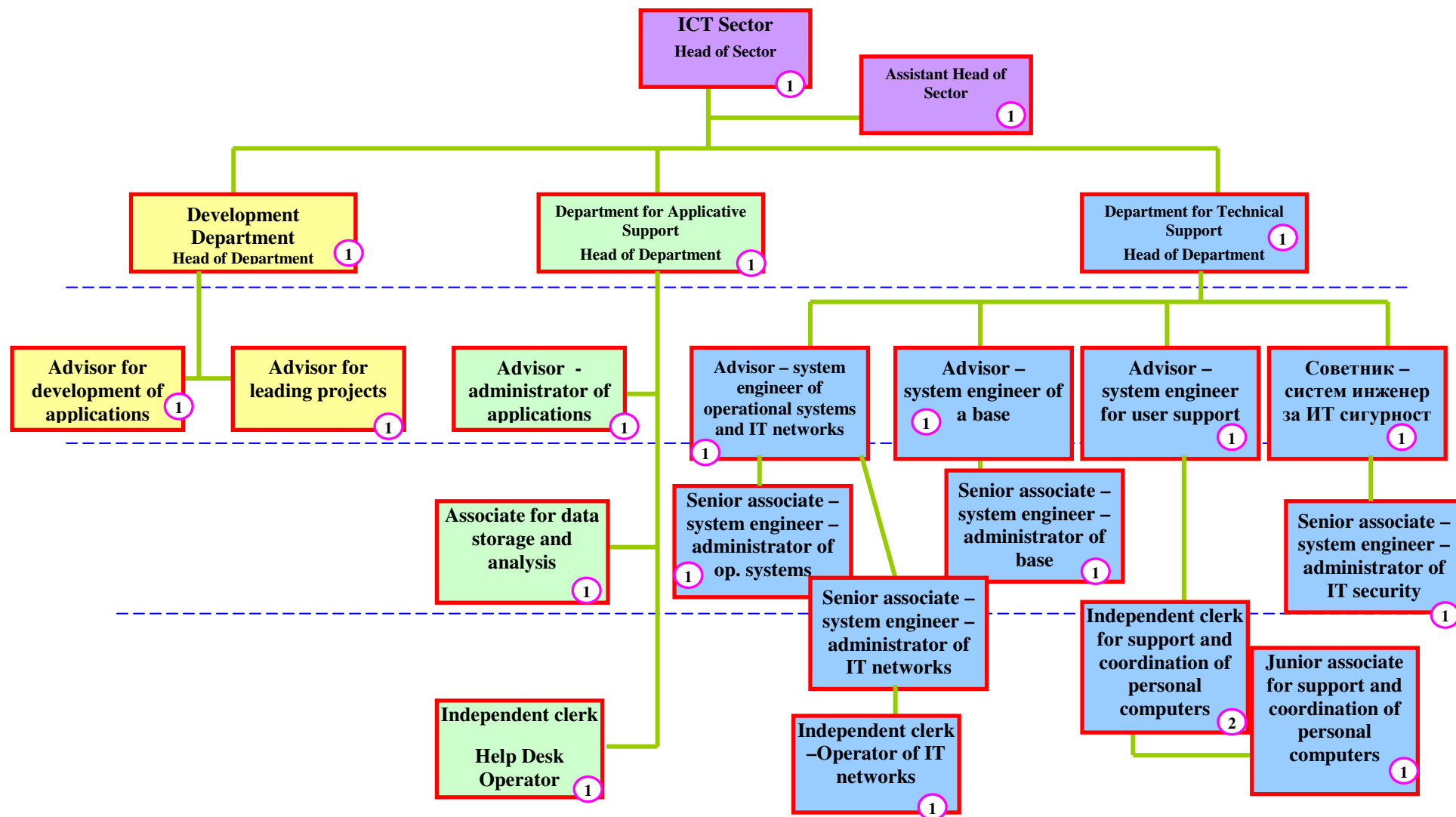
- Development Department

- Department for Application Support
- Department for Technical Support

In the Departments within the IT Center for the Justice System² (see chart in picture 1) the following activities are performed:

- Creation and preparation of nomenclatures for the Ministry of Justice, Courts, Public Prosecution, Judicial Council of Republic of Macedonia and Penal-Correctional Institutions;
- Coordination and mutual protection of the data base and back up with the Ministry of Justice, Courts, Public Prosecution, Judicial Council of Republic of Macedonia and penal-correctional institutions;
- Coordination and cooperation while performing the activities with the IT Center in the Supreme Court of the Republic of Macedonia;

² ICT Center of the Justice System should gradually start to employ staff, and should start working by the end of 2006.



Picture 1. - Chart of the IT center for the justice system

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- Monitoring, evaluation and implementation of the software applications in the Ministry of Justice, Courts, Public Prosecution, Judicial Council of the Republic of Macedonia and penal-correctional institutions;
- Planning, selection, implementation and maintaining of network devises, servers, personal computers;
- Planning, selection, implementation and maintaining devices for IT security and all other matters related to IT security;
- Planning, selection, implementation and maintaining of software components;
- Providing support and coordination of the functioning of the applications that are used in the Ministry of Justice, Courts, Public Prosecution, Judicial Council of the Republic of Macedonia and penal-correctional institutions;
- Providing support to the implementation of the applications that development wise and strategically would be used in the work of the Ministry of Justice, Courts, Public Prosecution, Judicial Council of the Republic of Macedonia and penal-correctional institutions;
- Organizing the exchange of data with the governmental institutions, justice system bodies and other institutions of other countries;
- Preparation of strategies for development and upgrade of the system and IT security;
- Preparation of projects based on strategic documents of the ICT Sector;
- Preparation of e-learning modules for professional development of the employees in the Ministry of Justice, Courts, Public Prosecution, Judicial Council of the Republic of Macedonia and penal-correctional institutions;
- Development and implementation of software solutions within the justice system;
- Providing secure, correct and usable data;

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- Providing security of the IT network and communication between the organizational units and communication with other institutions;
- Planning, evaluation and implementation of the physical and IT security;
- Monitoring, archiving, storage and return of data;
- Performs analysis and keeps statistics in the field of justice system statistics, introduces and supports data storage, analyses and submits data to the competent organizational units in the Ministry of Justice.

The existing ICT organization in the justice system is not completely adequate and coordinated from the aspect of projects and technical approaches. That is due primarily to the insufficient number of ICT staff that work in the Ministry of Justice, courts and other justice system institutions. Several projects were undertaken, that instead in one phase were completed in several phases, very often for solving the same functional requests, without a central plan or organization. That, on the other hand causes extension of the time necessary for creation and implementation of one integrated justice system ICT environment. The lack of such an organized structure causes the following risks:

- Repeating the development and the implementation of computerization projects for the same processes generates the need of repeated engagement of human and financial resources.
- The lack of plans at user level results with uncommon and different way of performing the same functions. This causes big problems during the maintenance, which is most reflected in the efficiency.
- The lack of clear organization and division of ICT roles and responsibilities in the Macedonian justice system, results in lack of interoperability and cooperation of different institutions, as well as in impossibility to exchange experience and resources.

For the purpose of overcoming those risks a new ICT organization is proposed

2.3.2 Draft new ICT organization in the Justice System

In order to create an organized, continuous and all inclusive process of computerization of the justice system of RM there is a need of establishing "ICT Council for the justice system of RM" that will have the following main functions:

1. Defining priorities regarding the ICT development and automation in the justice system, as well as creation and

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- development of ICT policies and supervising their implementation;
2. Implementation of ICT policies of the justice system.

2.3.2.1 The role of the new ICT organization

The basic role of the new ICT organization is to secure that the needs for computerization and automation of the justice system will be carried out and managed in accordance with the unique ICT strategy of the justice system.

The aim is to provide sustainable and continuous development of a computerized and automated justice system, precisely:

- short-term positioning of the basic requirements and preconditions necessary for continuous and coordinated application of the ICT in the justice system;
- long-term creation of all-inclusive environment that will provide and support the development of an effective, efficient and transparent justice system in the Republic of Macedonia

The new managerial role of the ICT Council in the justice system of RM will have the following jurisdictions:

- Defining of the ICT strategy and priorities for the justice system according to the needs for computerization of the justice system, listed in the Strategy for reform of the justice system.
- Providing all the necessary preconditions for the implementation of the ICT Strategy regarding the financial means, as well as human and technical resources for the specific projects, and convening regular periodical meetings for assessment of the progress of the effects from the implementation of the Strategy.
- Providing of an overall automation of the justice system, rational in regard of expenses and effects from its realization.
- Harmonization of the computerization of the Macedonian justice system with the other government policies for development of ICT, information society and e-Government.
- Providing preconditions for computerization of the Macedonian justice system in accordance with the legal provisions and the other regulations and standards regarding ICT security, protection of personal data and etc.
- Reassessment and upgrade of ICT Strategy for the justice system on regular basis, due to the appearance of new needs and priorities.
- Approval of all new programmes, projects and initiatives from the field of ICT and automation of the Macedonian justice system.

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- Regular follow up of the progress of the projects and assessment and approval/dismissal of the effect generated with it.

The ICT Council in the justice system of RM, while working and defining ICT policies and their implementation is governed by strict respect of the Law on protection of personal data, the Convention for protection of persons in regard of the automatic elaboration of data, as well as the Directive 95/46 of the European Parliament and the Council of protection of individuals regarding the elaboration of the personal data and the free exchange of such data. Also, the Council takes care of proper implementation of the measures stipulated in the "Regulation on technical and organizational measures for providing the confidentiality and protection of the elaboration of the personal data", "Regulation for elaboration of the personal data that represent special risk for the freedoms and rights of the subject of the personal data" and the "Regulation for the manner of keeping records and the form for keeping record of the personal record files", prepared by the Directorate for protection of personal data of the Republic of Macedonia.

On the other hand, the Council is also responsible for specific realization of all the tasks and activities stipulated in the ICT Strategy for the justice system. In order to provide better relation price/quality of the products from the ICT projects, the Council will not produce on its own applications that are designed "in-house", but for all the projects professional ICT companies and individual ICT consultants will be contracted. The advantages of such an approach are the following:

- **Financial** - The time necessary for development and implementation of ICT systems is only a small portion compared to the time for productional use of the system, and the very development and implementation require engagement of a big number of highly skilled and experienced ICT experts. In the course of the operational use of these systems there is no need of such a big number of ICT experts, that are not employed in sufficient number in the institutions of the justice system in the Republic of Macedonia, and since it is difficult to provide attractive salaries for them, it should not be expected that they can be retained in the justice system institutions for a longer period of time.
- **Quality** - The mission of the ICT Council for the justice system is not the same with the missions of the specialized ICT companies that invest in personal capable for designing, putting in place and maintaining ICT projects. If all of these functions are united in ICT experts from the justice system institutions that would be part of the Council, to be able to carry out all of those functions, than instead of specialized

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experts from different areas with top quality we will have a broader expertise from the stated fields with lower quality.

According to that the role of the Council is more directed towards management, project management, administration and maintenance. One of the significant tasks of this Council will be the care for the support of the ICT system users in the justice system through:

- Preparation and management with technical requests for project tasks for development and implementation of ICT systems, including contracts for post-project (post -sale) maintaining during and/or after the expiration of the warrantee.
- Preparation and management with contracts for system operations, providing all the necessary activities to get proper, safe and efficient functioning of the ICT systems. These contracts for ICT applications or technical purchases have to contain the following activities:
 - Support of the users for all the justice system institutions through organized "Help Desk", monitoring and documenting of all the reported incidents (mistakes, requests for changes etc.)
 - Installing corrections and upgrades of system and application software during the operational functioning of ICT systems
 - Education and training of new users for the ICT systems
 - Support of the ICT employees in the Macedonian justice system when they are performing their activities
- Preparation and management of central contracts for purchase and maintaining of ICT.
- Maintaining of a high level of up to date technical knowledge of all the employees in the ICT in all the justice system institutions for the latest events from the field of ICT.
- Providing physical and computer protection of data.
- Determining the need and securing of short-term contracts for technical assistance when necessary, but only for strictly determined issues and with strictly determined description of the delivered results.

2.3.2.2 Structure of the ICT Council in the Justice System of RM

This Council will consist of permanent members, temporary members, as well as invited members – guests from the institutions outside the justice system and observers. Regular members for the Council will be senior representatives of the Ministry of Justice, Courts (Representatives from the Supreme Court, Administrative Court, one Appellate Court and one Basic Court), Judicial Council of the Republic of Macedonia, Public Prosecution, Department for enforcement of sanctions, responsible for computerization of the justice system from every aspect of its field of work.

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The Council will convene on monthly meetings, and if necessary more often to follow, direct, approve or correct the work of the working groups tasked with the implementation of ICT Strategy in the justice system. The temporary members have the same rights and obligations as the permanent ones and they will participate at the regular meetings when the need of their expertise or responsibility shall arise. The members - guests are senior representatives (decision makers) from the institutions outside the justice system. That can be representatives from donor organizations, other ministries in the Government of the Republic of Macedonia, ICT representatives or other associations etc. Observers will be members that do not have a chance to participate in the decision making of the Council, and can be representatives from the media, companies contracted for certain project activities etc.

Because of the importance and the significance of the Council, its establishment, staffing, rights and obligations, has to be done and implemented from the highest leadership positions in the justice system institutions.

2.3.2.3 Organization of the ICT Council in the Justice System of RM

The Council should support the development and maintenance of a complex system composed of several different functionalities and levels of operation. It will have to possess one organization with distributed geographic structure to able to give successful ICT support of the users of the ICT systems, since such is the geographic location of the justice system institutions in the Republic of Macedonia

Thus, the organization of the Council tasked with the implementation of the Strategy will consist of 4 branch offices, located in the cities where the appellate courts are situated, in Skopje, Stip, Bitola and Gostivar, where ICT experts from the justice system institutions from the other municipalities will participate, according to the area of competence of the appellate courts over the basic courts.

The logical organization of the part of the Council tasked with the implementation of the Strategy will consist of 4 working groups, as follows:

- Working group for **development of ICT Systems** - responsible for preparation of nomenclatures for the Ministry of Justice, Courts, Public Prosecution, Judicial Council of the Republic of Macedonia and penal-correctional institutions; participates in the defining of technical specifications for preparation of new software modules; follows the latest program languages and technologies for programming; participates in the selection of programme design for application - compatible with the existing software; analyses the requests of the software solutions and prepares a plan and needs for realization; participates in the

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evaluation and monitoring of the implementation of new software solution; manages with the testing, documenting, user training and other activities for support: prepares time plan for preparation and implementation of new software modules; prepares analysis for further upgrade or replacement of the existing software solutions and manages the training for installation and usage of the software modules.

- Working group for **application support** - responsible for preparation of the appropriate documentation related to the support of the users of ICT application; manages the preparation of the appropriate documentation related to the application; monitors the operation of the application; manages the determination of the user groups related to the application; manages the preparation of manuals for the use of the application for the end users; manages the process of defining the messages; manages the process of analyses and statistics of data.
- Working group for **technical support** - responsible for the needs related to the technical issues (hardware, networks, communications etc.), as well as for standard application that are used by the ICT users in the justice system. These applications are standard software, such as: Operation systems, Data bases and Software for management and maintenance of networks. Also, this group is responsible for maintaining standard applications such as Office, Internet browser, Email Client etc.
- Working group for **justice system ICT standards** - responsible for the creation and maintaining of standards for: obtaining, storage and manipulation with data; security and safety; usage of internet and email; exchange of data; management and exchange of documents; open software; development environments; etc.

3 General Analysis and Assessment of the Current Condition

3.1 COMPLETED AND ONGOING ICT PROJECTS

3.1.1 PROJECT: PHARE 2000 - Technical Assistance for Reform of the Judicial System and Court Administration (3 phases) - (completed)

With the realization of the Project PHARE 2000, in January 2005, the activities related to the implementation of the information system for the justice system were rounded up, as follows:

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- achieving greater functionality of the application software for the courts in Skopje;
- installation, definition of parameters and configuration of that software in all the courts in the Republic of Macedonia, as well as training for the end users;
- installation, definition of parameters and configuration of that software in misdemeanor departments in the remaining 21 basic courts in the Republic of Macedonia, as well as training of the end users;
- preparation of new application solutions for the prosecution offices in the Republic of Macedonia, penal-correctional institutions in the RM and for the Judicial Council of RM, as well as training for their usage in the stated institutions.

The same project helped for partial equipping with hardware in all the justice system institutions, which helped to increase the percentage of the necessary installed equipment in the stated institutions.

Still, because of incomplete realization of the planned project requirements, defined in the objectives and goals of the project tasks, and because not all the activities planned in the project plan were carried out, a final report (by which this project would be considered for officially completed) was not signed.

3.1.2 PROJECT: CARDS 2003 – Technical Assistance for Reform of the Judicial System and Court Administration – (ongoing)

The aim of this project is continuous upgrade and functional round up of the PHARE 2000 project, for the purpose of completing the overall computerization process in the justice system institutions in the Republic of Macedonia. The project covers technical assistance and purchase of equipment in the following areas: IT policy, project management capacity, system development and implementation and systems training. The end goal is support of the Republic of Macedonia in its fight against crime and strengthening of the rule of law; improvement of the administrative procedures in the justice system institutions;

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improvement of the capacities for acting upon the cases in the courts; establishment and development of sustainable capacity for acting upon the cases in the Ministry of Justice.

The overall Project contains several components with its sub-components:

1. Purchase, distribution and installation of hardware equipment for the justice system institutions

- 1.1 Support of the establishment of a modern ICT center for the justice system within the framework of the Ministry of Justice and support of the other justice system institutions:
- 1.2 Hardware and software given in Annex 1 (the delivery was completed in the summer 2006. The distribution of the equipment in the justice system institutions is given in Annex 2 of this document)

The new ICT Sector in the Ministry of Justice should be equipped with 1 head of the Sector, 1 Assistant Head, 3 Sector Managers and 16 Advisors, Senior and Junior Associates and independent clerks in the three departments.

- 1.3 WAN – IP/VPN (Broadband virtual private network for the justice system)

The component for introduction of a broadband network (WAN) for the justice system means realization of interconnection of approximately 50 locations from the justice system with the use data IP MPLS based network.

Technical solution

The solution is based on the usage of the public telecommunication infrastructure for creation of a private corporative network. The physical network was is built on IP MPLS public telecommunication infrastructure of the Macedonian Telecommunications by using the following hardware devises:

- Cisco2801 и Cisco1841 routers, and

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- Cisco Catalyst 2950-24 LAN switches.

The communications and the physical connections with the basic network of MakTel are realized by using HDSL modems that are owned and maintained by MakTel, and for the usage of which a contract was concluded within the framework of the project for the period of 3 years.

Advantages of the WAN connection

- a) This manner of WAN connection provides optimal transfer of data structures through IP MLLS network which is a result of TCP/IP oriented applications.
- b) Creation of encrypted tunnels through the public network infrastructure for providing protection of the data transfer or transactions or other classified data
- c) Quality and availability of service

Distribution of network equipment and minimal speeds

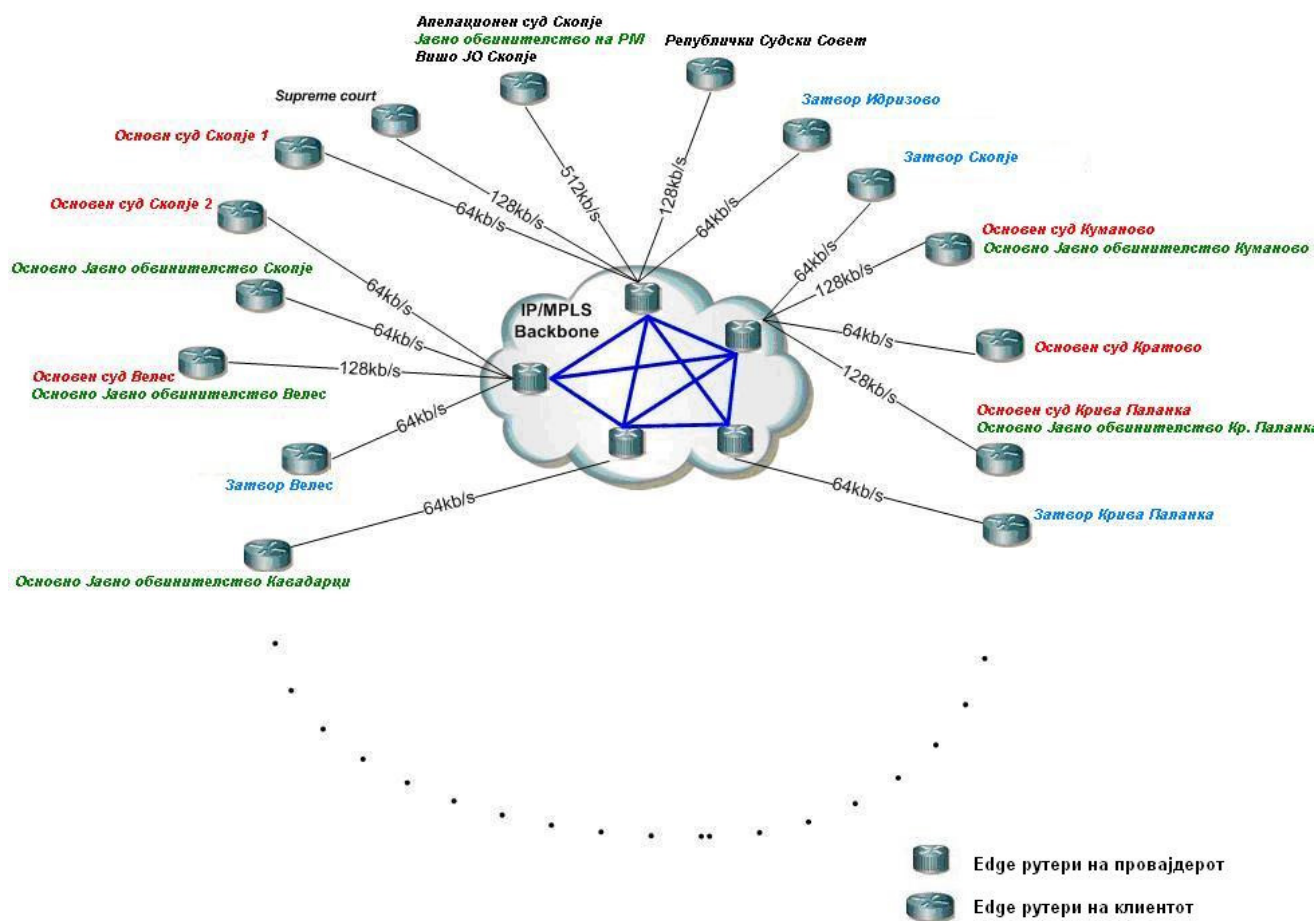
The interconnection is realized with IP VPN communication, by using the IP MPLS infrastructure. The data transfer speed through the network with this technology moves between 64kbps and 2Mbps. The minimal speeds for each location of the network are given in Annex 3.

Principal scheme of physical network

All the institutions of the Macedonian justice system are physically connected to the geographically closest location of "edge" router from the IP Backbone network of the Macedonian Telecommunications with the help of HDSL modem and transmission systems of MT.

The physical structure of the network in principle has the following appearance, as on Picture 1.

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Picture 2. – Principal scheme of the physical network

Logical design of the network

The logical design of the network is based on 2 main characteristic: 1) geographic location of the institution, and 2) functions of the institution. There are 4 hub&spoke VPNs in the first level distributed according to the geographic location – 2 VPNs with hubs in Skopje, VPN with hub in Bitola and VPN with hub in Stip, and this division is made in order to optimize the routing and traffic flow.

At the second level all 4 hubs are joined in completely network connected VPN, which provides communication between all the points that are parts of the different VPNs.

- 1.4 Purchase of a video conference equipment for basic Court Skopje 1 (completed)

2. Implementation of information system for the justice system

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Development and implementation of IT system for legal data base LDBIS - Legal Database) (ongoing - time frame for completion: end of December 2006)

The realization of the system plans for development, documenting, implementing and training for WAN and LAN version (CD ROM) of the information system for legal data base - LDBIS.

LDBIS system will provide:

- Fast access to the current legislation; and
- Access to the relevant precedent law.

The system contains:

- Laws and regulations
 - o Constitution of RM;
 - o Interventional agreements and conventions ratified by RM;
 - o Laws and regulations of RM published in Official Gazette;
 - o Archive on inactive laws of at least 2 years before start of work of the system;
- Precedent law:
 - o Key precedent law selected by the EC Justice department;
 - o Precedent law related to the European Convention for protection of human rights and fundamental freedoms;
 - o Court decisions:
 - Basic courts of RM, according to their selection
 - Appellate courts of RM, as a result of their selection from the precedent law;
 - Supreme Court of RM, according to their selection;
 - Decisions and definitions of the Constitutional Court;
 - Decisions and definitions of the Administrative Court;
 - Decisions and definitions of the Arbitrate Court in RM;
 - Trade and industrial Chambers.
 - o Statements of the Supreme Court of RM.

With the project training was carried out for the following users of LDBIS:

Institution	End users	IT administrators (trainers)
Judges in all courts	423	40
Judicial administrative personal	313	

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Prosecution offices	200	20
Prisons	50	50
Bar Chamber	100	10
Notary Chamber	20	2
Total	1106	77

Installation of software applications for the Public Prosecutions, Judicial Council of the Republic of Macedonia and the Department for enforcement of sanctions (prison administration) (on going - time limit for completion: end of December 2006)

The aim of this sub-component of the project is:

- Implementation of the remaining parts of the Court Information System (SIS), i.e. "upgrade" and implementation of the previously developed IT applications intended for - Judicial Council of the Republic of Macedonia- JCRM, Public Prosecution - PP, and the Department for Sanctions - DS to the level of usability that will satisfy these institutions.

The completion of SIS with applications for JCRM, PP and DS in fact presents a third phase that follows the previous two projects from EAR (CARDS) for development of the Court Information System (SIS) realized in the period 2003 - February 2005.

The further development of the applications is realized by using Borland Delphi, for the environment that works under MS Windows 2000/2003 operation system and MS SQL Server

Information system for the Department for Enforcement of Sanctions (ongoing)

This application contains the following functionality:

- Users and user rights
- Registration of convicted persons
- Registration of visitors
- Registration of professional documents
- Monitoring the health of the convicts
- Registration of interruptions and escapes
- Requests for external work
- Release

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- Reports

This represents a standardized, unified system based on central server located in ICT Center of MOJ which provides automatic transfer of files for individual cases (individuals) and central keeping and management with their records. This system also, provides a link toward the central crime base and registers of ID cards and passports that are in the jurisdiction of the Ministry of Interior.

Since the Department for Enforcement of Sanctions, as well as the Prisons in Macedonia do not have IT departments or employees responsible for the IT, it is decided the ICT Sector of the Ministry of Justice to take care and to provide all the services related to support of the Department regarding the ICT issues.

IT application for the Public Prosecution (ongoing)

The interventions regarding the part of SIS with application in PP is realized with the application of analysis of the current application in respect of:

- Existing documentation
- User application, to determine all the functions and procedures that are covered in the existing application
- Design of the application
- Data base and the manner of preparation of the individual modules

IT application for the Judicial Council of the Republic of Macedonia (ongoing)

The upgrading of this application is made in order to build in it the new legal changes that have entered force sine September 2006. The application takes care for the work of the data base that covers personal data and data on the performances of all the courts. The courts submit monthly and annual reports (that need to be standardized) with data on the work of all the judges and then these data need to be inserted and elaborated in this system.

3.1.3 PROJECT: USAID/DPK – Court modernization

- a) Automated budget management system (completed)

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This activity is within the framework of the Macedonia Court Modernization Project, financed by USAID, and realized by DPK Consulting. The aim is in all 32 courts in Macedonia to put in function the integrated computer solution in 5 areas: 1) financial work, 2) material work, 3) personnel files and salaries, 4) planning and realization of the budget, 5) inventory.

The data base is central in the Supreme Court, where the data base will also be maintained.

The connection between the courts and the central data base is carried out through the WAN network described previously with this document.

For this project are purchased:

1. 32 servers for all the courts (what type???)
2. 1 Firewall (characteristics ?????)
3. 1 back up and storage server in the Supreme Court (characteristics?????)
4. 2 mail servers in the Supreme Court for mail system of the Macedonian judiciary (characteristics?????)
5. Lotus Domino with 110 client licenses
6. Trend Micro Client/Server Suite anti virus with 110 licenses

From the side of the judiciary, responsible for this project is the Court Budget Council.

- b) Preparation of web sites of the courts that can be accessed through a web site of the Supreme Court of RM (ongoing).
- c) Testing of the Court Information System (CIS) in four courts and preparing recommendations for its upgrade and improvement (ongoing).
- d) Active Directory for 27 courts in Macedonia (ongoing)

This component of the project is realized in order to help improve the management with the IT systems in 27 courts in Macedonia , by purchasing logical design, implementation and 2 months maintenance of MS Active Directory.

MS Active Directory will contain:

- Scripts for automatic start up and shutdown of computers;
- user logon and logoff sessions
- automatic coping of certain files in all the servers and work stations in all the courts in RM;
- automatic installation from the central location.

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IMPORTANT NOTE:

It is necessary to upgrade the operational systems of the existing work stations in the courts in RM from Windows 98 to Windows XP or higher.

3.1.4 PROJECT: Automatic assignment of cases (ongoing)

Within the framework of this project, support by OSCE a computer system for automatic assignment of cases is put in place. In this way the human and political factor is annulated in the process of assignment of cases to certain judges. This decreases the possibilities for manipulation and postponing of the judicial procedure. The software provides automatic, equal and independent random assignment of cases per judges, according to which each judge will receive equal number of cases, without including any external influences and factors, which contributes to the beginning of independent and unbiased just assignment.

In 2006 this software has been installed only in Appellate Court Skopje, and in 2007 should be installed in all the basic and appellate courts in Macedonia.

3.1.5 PROJECT: Realization of LAN networks in all the courts (ongoing)

For the needs of all the levels of courts in Macedonia, from finances allocated from the Court Budget Council in the amount of 3.500,00 denars a realization of local IT networks in all the courts in Macedonia is planned for. It covers purchase and installation of the overall active and passive equipment.

In the moment it has been determined that the finances provided are not sufficient for realization of the whole project and it is expected a decision to be passed regarding the further course and the manner in which the project will be realized.

Status of the project (check)??????

4 ICT Technical Architecture (TA)

The technical architecture presents a framework whose aim is to identify the standards, specifications, and technologies that build and support the ICT systems in the justice system. This technological architecture uses concepts of: Domain, Disciplines, Technological Fields, and Technological Specifications.

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4.1 VISION FOR THE TECHNOLOGICAL ARCHITECTURE

The acceptance of a consistent framework in respect of which the National Council for ICT in the justice system can monitor and assess the efforts for development and construction of ICT systems in the justice system having in mind the following objectives:

- Easy integration of the applications, application services and data to provide easy and good cooperation of the institutions from the justice system.
- Increasing the level of interoperability between the applications within ICT systems in the justice system.
- Better response to the changing needs and requests of the justice system users and fast development of ICT solutions.
- Faster putting in function of the new applications.
- Efficient sharing and re-usage of the existing ICT solutions and benefits.
- Enlargement of the process of review of possible alternatives as a part of the process of assessment of the most useful solution from all the potential ICT solutions.
- Decrease of the resources and expenses necessary for development, support and maintaining of the applications from the justice ICT system.
- Enabling the employees in the justice system, responsible for ICT to decrease the expenses, improve the level of the services towards the ICT users, as well as increase of the flexibility through the institutions of the justice system.

4.2 DESIRED CONDITION

The implementation of TA will result with one-service oriented architecture in the work of the Macedonian justice system. It is expected individual institutions and the existing ICT solutions to migrate toward a condition harmonized with TA, this will occur when new ICT investments will become available, or when more significant upgrades will be made, as well as improvements or replacements of the existing systems.

4.3 PRINCIPLES OF TA

The Macedonian justice system will develop the ICT systems for its needs and for the needs of the institutions that are part of it, through joint approach, by designing applications to be flexible, to be able to use the advantages of the components that can be reused and shared between the institutions, where possible the sharing of information and their re-use is encouraged, and the best use of the existent technological infrastructure is available.

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4.4 STRATEGY FOR TA

The technical architecture of the ICT systems in the Macedonian justice system has two aspects:

a) Logical

- Specific software for the justice system
 - Client (User interface)
 - Presentation logic
 - Business logic
 - Data access logic
 - Data
 - Operation system
- General ICT software
 - Workflow
 - Document Management
 - Cooperation (Groupware)
 - Communication (email, messenger)
 - Directory Services
 - Security and protection (anti virus, digital certificates, etc.)
 - Monitoring services

б) Physical

- Hardware
 - Servers
 - Desktop computers
 - Notebook computers
 - Printers
 - Network printers
- Communications
 - WAN
 - LAN

During the realization of the technical ICT architecture, this Strategy plans for centralized approach in respect of each segment of the Macedonian justice system. This means excellent communication infrastructure with high speeds and flows. Still, besides all of that, this centralized approach can be realized in several phases, following these recommendations:

1. Development intended for a "thin client". In this way the workstations can access the applications that are located on the server through internet browser, for example, even if the workstation and the server are at the same location. The benefits from this development are the following:
 - a. Work stations can be cheap and can be used only for specific justice system applications, without having the possibility to use on them standard office applications

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such as text processor, cross tables, presentation software etc.;

- б. These work stations have lower maintenance cost of their hardware and software;
 - в. There is no dependency from the purchase of client licenses for different software packages or data bases during update and/or upgrade of their server components.
2. Due to the existing condition with the communication possibilities of the institutions of the Macedonian justice system, as a transitional phase it is recommended to have a distributed access with daily replication of data. For that purpose, the existing servers will be used, those that are already purchased for all the institutions of the Macedonian justice system.

In future, when a satisfactory communication infrastructure is achieved, it will be possible to transfer to central online system of working with small changes of the existing applications.

4.5 COMPONENTS OF TA

TA specifies standards, specifications, and technologies for each level or area from the service-oriented architecture. For easier and simpler defining of TA in each area its different elements are organized according to the following components:

- Domains - logical groups of disciplines that compose the main TA components.
- Disciplines- logical, functional areas that pertain only to one domain.
- Technological areas - technical issues and topics that are relevant for each discipline.
- Technological specification - sum of standards for products, protocols, specifications and configurations given for each Technological area.

The following chart gives a presentation of Domains, Disciplines and Technological Areas relevant for ICT technological Architecture of the Macedonian justice system.

Technological Area	Technological Specification	
	Functions	Attributes
Client (user interface)	<ul style="list-style-type: none"> - Processing of: <ul style="list-style-type: none"> o HTML/XML o Scripting o Java applets / ActiveX 	<ul style="list-style-type: none"> - Price for: <ul style="list-style-type: none"> o License o Configuration and adjustment o Support o Upgrades

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Technological Area	Technological Specification	
	Functions	Attributes
		<ul style="list-style-type: none"> - Quality - Support <ul style="list-style-type: none"> o Operational o Maintenance - Portability of different platforms of operational systems - Respecting the accepted standards <ul style="list-style-type: none"> o Support of 128 bit encryption o Support of X.509 v.3 digital certificates o Support f HTML/XML o Javascript/VBscript - Open source
Presentation logic	<ul style="list-style-type: none"> - Reprocessing of interface - Delivery of information towards user 	<ul style="list-style-type: none"> - Price for: <ul style="list-style-type: none"> o License o Configuration and adjustment o Support o Upgrades - Quality - Support <ul style="list-style-type: none"> o Operational o Maintenance - Portability of different platforms of operational systems - Respecting the accepted standards <ul style="list-style-type: none"> o JSP, ASP, и др. o XML o Javascript/VBscript - Open source
Business logic	<ul style="list-style-type: none"> - Component based - Transaction monitor - Web services 	<ul style="list-style-type: none"> - Price for: <ul style="list-style-type: none"> o License o Configuration and adjustment o Support o Upgrades - Quality - Integrated Development Environment (IDE)

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Technological Area	Technological Specification	
	Functions	Attributes
		<ul style="list-style-type: none"> - Support <ul style="list-style-type: none"> o Operational o Maintenance - Portability of different platforms of operational systems - Respecting the accepted standards of models <ul style="list-style-type: none"> o EJB o COM+ - Open source
Data access logic	<ul style="list-style-type: none"> - Connection independent from the type of the base - Realization of the connection with the base or access to any table form of data - Sending SQL commands - Processing of results - Access control 	<ul style="list-style-type: none"> - Quality - Support <ul style="list-style-type: none"> o Operational o Maintenance - Portability of different platforms of operational systems - Respecting the accepted standards <ul style="list-style-type: none"> o JDBC o OLE DB
Data	<ul style="list-style-type: none"> - Operational systems 	<ul style="list-style-type: none"> - Price for: <ul style="list-style-type: none"> o License o Configuration and adjustment o Support o Upgrades - Quality - Support <ul style="list-style-type: none"> o Operational o Maintenance - Portability of different platforms of operational systems - Interoperability (with other data sources, management systems and etc.) - Respecting the accepted standards <ul style="list-style-type: none"> o SQL/SQL2 - Open source
Operational	<ul style="list-style-type: none"> - File servers 	<ul style="list-style-type: none"> - Price for:

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Technological Area	Technological Specification	
	Functions	Attributes
system	<ul style="list-style-type: none"> - Print services - Network services 	<ul style="list-style-type: none"> o License o Configuration and adjustment o Support o Upgrades - Quality - Support <ul style="list-style-type: none"> o Operational o Maintenance - Portability of different hardware platforms - Interoperability with different operational systems - Open source
Workflow	<ul style="list-style-type: none"> - Modeling of processes <ul style="list-style-type: none"> o Users/roles o Resources/conditions - Management with processes 	<ul style="list-style-type: none"> - Support for developmental platforms - Integration with other systems and applications - Embedded or standalone
Document Management	<ul style="list-style-type: none"> - Capturing - Conversions - Repository management - Versioning - Archiving - Access control - Alerting/monitoring 	<ul style="list-style-type: none"> - Easy to use - Integration with standard software - Flexible network connection through the institutions and between them
Cooperation (Groupware)	<ul style="list-style-type: none"> - E-meetings - Chat - Whiteboard - Broadcasting 	<ul style="list-style-type: none"> - Easy to use - Integration with standard software - Flexible network connection through the institutions and between them
Communication	<ul style="list-style-type: none"> - Inter-system communication - Inter - applicative communication <ul style="list-style-type: none"> o Procedure calls o Messages o Web services - Messaging services - E-mail services 	<ul style="list-style-type: none"> - Respecting the accepted standards <ul style="list-style-type: none"> o RPC o JMS o Web services o E-mail (POP3, SMTP)

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Technological Area	Technological Specification	
	Functions	Attributes
Directory Services	<ul style="list-style-type: none"> - Directory Management: <ul style="list-style-type: none"> o Users o Systems o Services - Look-up 	<ul style="list-style-type: none"> - Respecting the accepted standards <ul style="list-style-type: none"> o LDAP
Security and protection	<ul style="list-style-type: none"> - Digital certificates (PKI) <ul style="list-style-type: none"> o Signatures o Encryption o Authentication - Anti virus 	<ul style="list-style-type: none"> - Price for: <ul style="list-style-type: none"> o License o Configuration and adjustment o Support o Upgrades - Quality - Support <ul style="list-style-type: none"> o Operational o Maintenance - Portability of different platforms of operational systems - Respecting the accepted standards <ul style="list-style-type: none"> o X.509 o PGP o Central alert system (за анти-вирус) - Open source
Monitoring services	<ul style="list-style-type: none"> - Monitoring <ul style="list-style-type: none"> o Infrastructure (resources/systems) o Applications o Users - Long distance administration - Alerting - Logging - Reporting 	<ul style="list-style-type: none"> - Price for: <ul style="list-style-type: none"> o License o Configuration and adjustment o Support o Upgrades - Quality - Support <ul style="list-style-type: none"> o Operational o Maintenance - Portability of different platforms of operational systems - Respecting the accepted standards <ul style="list-style-type: none"> o SNMP - Open source

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5 Priorities for ICT Development

Under the priorities for future development of ICT solutions all the projects and initiatives for realization of short-term, mid-term and long-term objectives of the Macedonian justice system in regard to ICT.

According to the analysis of the current condition and following the needs for further computerization of the justice system given in Chapter 2 and 3 of this strategy, the following priorities were identified:

- Short-term
 1. Providing of ICT personnel for the Macedonian justice system and their permanent training;
 2. Support of the ICT center for the justice system;
 3. New purchases and maintaining of ICT in the justice system;
 4. Improving the Court Information System (CIS) and introducing it in the work of all the courts in the Republic of Macedonia;
 5. Upgrade of CIS with management reports;
 6. Assistance during the implementation of CIS;
 7. E-mail system and cooperation in the courts in RM
 8. Project for roll out of justice system network.
- Mid-term
 9. Introduction of Document Management system in the courts;
 10. Introduction of a system for human resource management;
 11. Assessment and improvement of the security and safety of ICT systems in the justice system;
 12. Access to the legal data base and Official Gazette for the public- free of charge
 13. Maintaining of WAN broadband virtual private network for the justice system of RM.

5.1. DEFINED PROJECTS AND ACTIVITIES

5.1.1 Providing of ICT personnel for the Macedonian Justice System and their permanent training

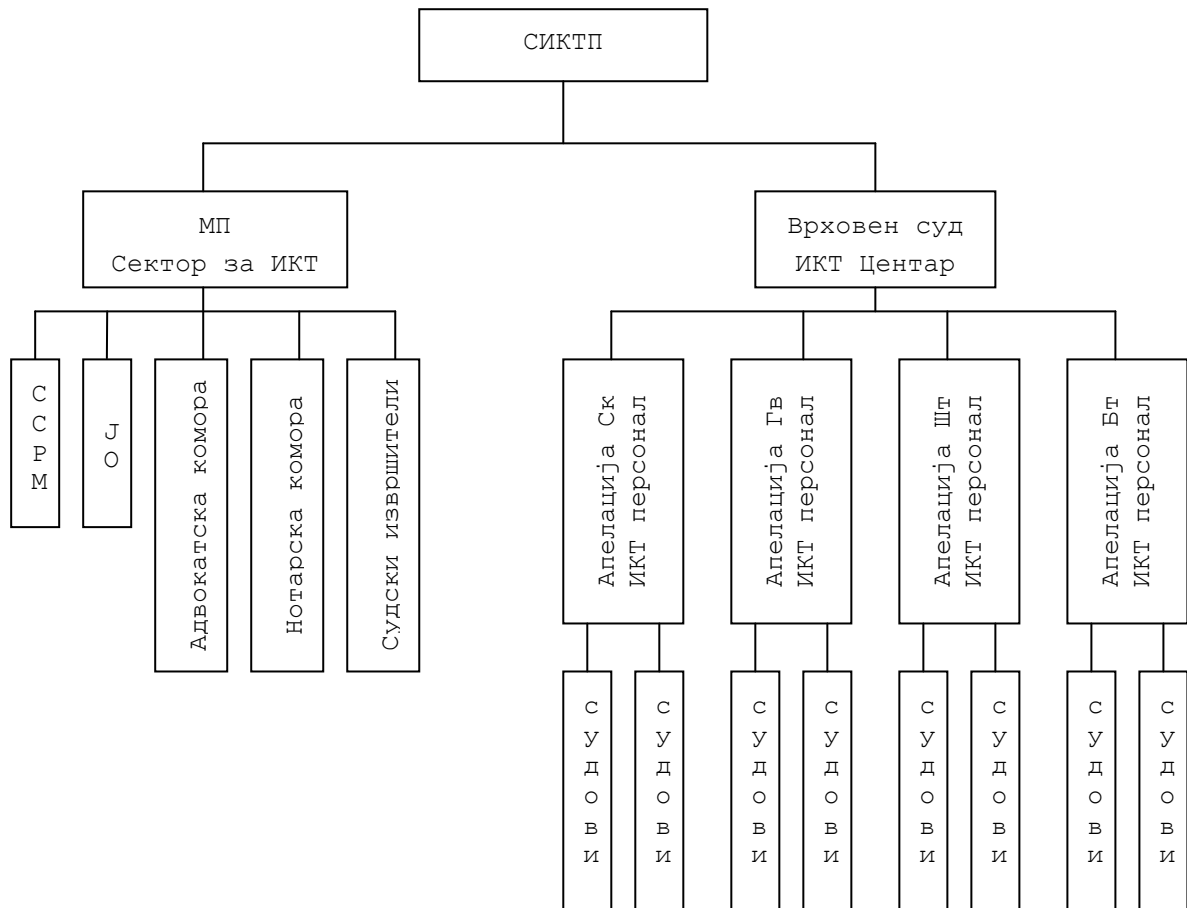
For an appropriate future development of the IT systems and the process of automation of the justice system to the level of construction of an service-oriented system, it is necessary special

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attention to be dedicated to a quality ICT personnel in all the institutions of the justice system.

Further more, the maintaining of the existing facilities, or those that are developed or implemented at the moment has to be done by internal ICT personnel from the justice system, who will also have

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the key role in the process of giving support to the users of the ICT systems.

The new systematization of MOJ and the creation of special ICT Sector for ICT, it will have to get gradually equipped with personnel, 12 employees in the first year and 5 more in the following 2 years.

At the same time, it is necessary to equip the courts with ICT personnel, with 3 new ICT experts in the ICT Center of the Supreme Court and 2 ICT experts in each of the four Appellate courts.

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This can fulfill the condition for creating a new structure for maintaining of ICT systems for the justice system.

In this way all the courts will have necessary support from one central focus point during the phase of implementation and maintaining of the Court Information System. For general training of system administrators it is necessary to allocate \$100.000 US dollars for the period of three years, while for the payment of salaries for the first year \$240.000 US will be necessary, and the second year and each year afterwards \$300.000 US.

Time limit: The first year employment of 23 ICT employees, the second 5 more, and the training should be continuing for each year

Financial Projection: \$100.000 US training for 3 years
\$240.000 US personnel first year
\$300.000 US personnel second year
\$300.000 US personnel third year

Total: \$940.000 US

5.1.2 Project for Support of ICT Sector of the Ministry of Justice

The new Sector for ICT of the Ministry of Justice should have a broad focus of action in the ICT field in the justice system and help the ICT Council for the justice system of RM to develop and implement one complete ICT strategy for the justice system. This Sector, together with the ICT Council in the justice system of RM, should provide different systems that would originally be developed for following and registering of different specific activities in the justice system, to provide exchange of information between them and to provide information for the Ministry of Justice. This sector, together with the ICT Center of the Supreme Court will present the frame of the new Council responsible for implementation of the ICT Strategy, which together with the management organization of the Council will initiate one open and all-inclusive discussion in order to define in details the procedures and the standards that need to be incorporated for the new systems.

The other key issue is the formulating and documenting the standards for the data. That also requires a process led by the employees in the Sector, together with the remaining members of the National Council that should additionally cover one information campaign with all the institutions in order to introduce and institutionalize these standards. The Ministry of Justice has to maintain main compilation of charts of regulation in the data base and should be capable to provide complete documentation of these standards. These regulations and the standardized data should provide exchange of

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data from different elements of the justice system. This will enable and simplify the process of gathering data both in the courts and at the level of the Ministry.

All the institutions in the justice system should be in a position to exchange and receive data:

- Ministry of Justice;
- Supreme Court/courts;
- Judicial Council;
- Public Prosecutor;
- ;
- Prison administration;
- Bar Association;
- Notary Chamber; and
- Chamber of Enforcement Agents.
-
-

In order to achieve these aims; the newly-established Sector for ICT in the Ministry of Justice should be in a position to carry out significant number of activities:

- Help in the creation of a clear vision (and documentation) for what has to be added in the existing Court Information System.
- Development, maintenance and implementation of the overall ICT strategy and providing help for the justice system.
- Preparation of description of the overall functional specification through analysis of the current system and giving recommendations for that how and why the system should be changed in this way.
- Development and finalization of new forms of the system, that will be used so that the new processes can be automated.
- Starting of formal questioning and procedure of approval of each module and all the necessary changes of the forms.
- Starting of the procedure for internal decision making for preparation of standards for the software and the hardware platforms that are used for the system.
- Preparation of inventory of the overall hardware in the justice system.
- Purchase of technical assistance for implementation of the overall ICT strategy and providing help for the justice system.
- Building of technical capacities:
 - Purchase capacity
 - o Services for purchase and development of the system.
 - o Purchase of necessary hardware for the system (pilots)
 - o Training for purchase of the system
 - Training capacity
 - o General ICT training (standard computer literacy)
 - o Application specific for each module; the training will focus on the relevant justice system institutions.

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- o Other training if necessary.
- Operational capacity
 - o Creation of necessary steps for the implementation phase
 - o Purchase of the necessary hardware for general implementation
 - o Training for purchase of the implementation

Time limit for completion: 1 year (1,5 year??)

Financial projection: \$250,000 US

5.1.3 New purchases of hardware and software and maintaining of ICT in the justice system

The need of the Ministry of Justice, the courts and the other justice system institutions for the purchase of new hardware is evident, especially if you have in mind that a big part of the equipment is in operation for more that five years. The outdated equipment will not be functioning with the new applications that are currently being developed or will be developed soon, and present part of the project plan of this Strategy. This is especially important in respect of the software applications that are being developed and are part of the CARDS programme for technical assistance of the justice system. For that purpose it is necessary to allocate \$550.000 US. At the same time the ICT Sector of the Ministry of Justice, together with the ICT Council in the justice system of RM should prepare a plan for maintaining of future purchases of ICT equipment that will be adequately followed with planned and secured financial needs.

Time limit for completion: 3 years - in phases and for the plan for maintaining the future purchases 3 moths

Financial projection: \$550,000 US

5.1.4 Improvement of the Court Information System (CIS) and its introduction in the work of all courts in the Republic of Macedonia

The current project for upgrade of the information system for the justice system does not cover upgrade of the applications for the courts. For that purpose, based on the needs analyses for the changes and amendments of the current system that USAID is caring out in several pilot courts in the Republic of Macedonia, it is planned to upgrade the system with new modules and to improve the old ones, including: improved user environment; more efficient

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processing of documents; additional information and messages from the system, etc.

Time limit for completion: 1 year

Financial projection: \$200.000 US

5.1.5 Upgrade of CIS with management reports

This project consists of 2 subcomponents:

1. Development of a module for managing reports for the Court Information System
2. Strengthening of the capacity of the MOJ and the Administrative Office for use and analysis of the statistical reports and their integration in the process of policy making

The software of the Court Information System has a need of a new module for improvement of the application with system for statistical reports and reports on the work. The new statistics module should be developed so that it will generate all the required statistical data on the courts, as well as the standard report necessary for the Ministry of Justice. Both elements should be synchronized, and the basic needs should be identified and documented for achieving complete harmonization of the number and the structure of the reports between the courts and the Ministry of Justice.

The new "module for statistical reports" will provide easy generating of "reports on the work of the courts". Training is necessary for these automated reports on the court statistics in order to provide a possibility to analyze in different ways the existing data (for example through analysis of trends, modeling data, etc). The sophisticated methods for data analysis will provide different possibilities for the Statistics Department in the Ministry of Justice for review and presentation of data. The technical assistance necessary for this work will be provided by hiring.

The new management report will provide assessment of the judicial work. It will include the following information for generating reports (but will not be limited to them only):

- Open cases at the beginning of the reporting period;
- Cases filed during the reporting period;
- Cases closed during the reporting period;
- Open cases at the end of the reporting period;
- Clearance rate (closed cases, % of filed cases)
- Journal of the court

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- Daily list of cases
- Presence of court clerks and court staff
- Reports necessary for the Ministry of Justice
- Rate of harmonization of the reports sent to the Ministry

These reports should also provide a possibility for identification of the nature of the decisions (for example dismissal, agreement, accepting the blame and trial) and/or analysis of filed, closed cases, according to the type of the case, etc.

These improvements of the Court Information System should be done during the next phase of the modernization process, in accordance with the World Bank Project. The new ICT Center in the Ministry of Justice should take over the task of preparing of the specific needs of this new module.

Time limit for completion: 1 year

Financial projection: \$400.000 US for component 1
 2\$00.000 US for component 2

Total: \$600.000 US

5.1.6 Project for assistance with the implementation of CIS

The previously noted disadvantages of an adequate and sufficient training in the pilot courts where the CIS was implemented will be eliminated with this project in the course of the implementation of CIS in the remaining 25 courts. In average for this activity it is necessary to allocate \$20.000 US for each court. The aim of the project is training of the personnel, training materials and installation and testing of the software. At the beginning the ICT Sector of the Ministry of Justice with the remaining members from the working group for development of ICT systems at a Council for the justice system of RM will prepare a detailed plan for implementation and time agenda for all the courts with a list of priorities.

Time limit for completion: 1 year

Financial projection: \$450.000 US

5.1.7 E-mail systems and introduction of Internet in all the courts in RM

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The aim of this project is to plan and realize system of electronic mail for all the courts in the Republic of Macedonia. It is a recommendation all the e-mail addresses of judges, lay judges and judges assistants from different courts to go through several e-mail servers with different domains, that will be located and maintained in the ICT Center of the Supreme Court. The proposal for the domains is:

- ossud.mk,
- apsud.mk,
- upsud.mk,
- vrhsud.mk,

and hence the e-mail address of a judge, lay judge or judges assistant from any basic court in RM would be name.surname@basiccourt.mk.

Second proposal is to have only one domain entitled court.mk, and hence each judge or employed in any court in RM would have e-mail address name.surname@court.mk.

Also, this project will provide education for all the users of the future e-mail system in the courts in RM to be able to use the advantages of the communication in the daily work.

Time limit for completion: 1 year

Financial projection: \$450,000US

5.1.8 Project for implementation of justice system network

The aim of this project, in the line of the functioning of the overall reform of the justice system in Macedonia, is to provide bigger transparency and accountability of the justice system institutions in RM and to get closer the courts to the public.

This web-application, available on internet will contain data on all the courts in Republic of Macedonia with their jurisdictions, data on the judges, prosecutors, lawyers, notaries, enforcement agents, expert witnesses and court interpreters.

The web-page will provide to the interested parties access to different information connected to the justice system institutions in RM and the legal profession in general. Besides the other information, the web page will also have:

- Manuals for preparation and mailing documents to the courts;
- Data on the jurisdictions of the courts in the Republic of Macedonia with a map of the jurisdiction;

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- Data on the expert witnesses;
- Data on the authorized court interpreters;
- Data on the amount of certain court fees, expenses and etc.

The aim of providing bigger transparency of the justice system of RM towards the citizens will be provided so that all the information and data on this internet page will be presented with a clear and understandable language, and thus the information can be used by everybody that would need this information, regardless whether they have legal background or not.

From this web page there will be links to other web pages from the area of the justice system such as: legal data base, the web page of the Ministry of Justice, Official Gazette, law faculties, Judges Association, Public Attorney and etc.

Time limit for completion: 1 year

Financial projection: \$400,000 US

5.1.9 Project for introduction of Document Management System (DMS) in all the courts

For further development and construction of a completed automated process of court operation it is necessary to introduce a modern system of document processing in the courts.

The paper documents received in the service have to be organized in order to be useful. They are usually given a number, sorted, registered, connected, put in folders and in cabinets. Without these steps nothing can be found. In this aspect, the electronic documents are not different. The system of digitalization (scanning) of documents should provide several different methods for organizing and information for further use. Whatever combination of methodologies for case processing will be used it has to be easy for usage and understandable for the people that look for the documents, as well as for those that manage the documents.

During the realization of the DMS, it will be taken into account the system of digitalization of documents to be adjusted to the existing procedures. In that way it will be necessary to introduce smaller changes and less in number in the process of operation and that would require less training for the employees that will use the system.

Time limit for completion: 1 year

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Financial projection: \$900,000 US

5.1.10 Project for introduction of human resource management system

In order to better manage the biggest expense in the justice system – human resources – this project will help create one integrated, several year long strategy for human resource management. The aim will be to create more flexible work force, with broader qualifications in order to better satisfy the requirements for quality service. In order to develop personnel with higher quality that will be more efficient, and in line with the recommendation for the human resources, the training will be in the focus of this sub-component.

The sub-component in this project would provide technical assistance in the designing of a training plan for the justice sector in cooperation with the Ministry of Justice and the justice system. The training plan has to include creation of curricula, as well as recommendations for the modules for the training courses.

The key characteristic of the Human Resource management system is to provide the Judicial Council, as well as the Court Secretaries and President Judges to use the available data on the decision related to the performance. The current human resources system is a manual system and does not allow fast access to the available data. This automation should provide easy generation of “performance reports”.

Time limit for completion: 10 months

Financial projection: \$300,000 US

5.1.11 Assessment and improvement of the security and safety of the ICT systems in the justice system

The aims of this project are:

- Preparation of assessment of the security and safety of the ICT systems in the justice system of RM by a specialized company and identification of optimal technical solutions for creation of a unified secure network with separate access levels to information and data;
- Implementation of security solutions proposed in the security assessment;

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- Preparation of obligatory measures for security and safety of the ICT systems in the justice system of RM that should be applied by the system administrators and users;
- Implementing of solutions for electronic signature in all the justice system institutions;
- Creation of one special team of ICT experts employed in the justice system institutions of RM and external members that will be tasked with taking over and manage the mechanisms for protection and security and creation of a „call-center“ for questions from user of the ICT systems in the justice system related to the security;
- Training and education of the users on matters related to the security and safety of the ICT systems in the justice system institutions of RM.

Time limit for completion: 36 months

Financial projection: \$2,000,000 US

5.1.12 Access to the legal data base and the Official Gazette for the public- free of charge

The services of the Official Gazette of the Republic of Macedonia are charged on annual level. For that purpose a contract will be concluded for lease of internet lines for access to the Official Gazette data base for the period of three years for 1500-2000 users.

Time limit for completion: 10 months

Financial projection: \$400,000 US

5.1.13 Maintaining of WAN broadband virtual private network for the justice system of RM

Within the project for technical assistance for the reform of the judicial system and court administration supported by the CARDS 2003 program of the European Commission it was planned to cover the expenses for usage and maintenance of WAN infrastructure of MakTel for the period of three years. After the expiration of this period it is necessary to plan \$100.000US in the budget, annually, for further maintenance and usage of the telecommunication infrastructure of the Macedonian telecommunications for the functioning of the WAN network for the Macedonian justice system.

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Time limit for completion: from year to year starting from 2010

Financial projection: \$100,000 US (each year)

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**ANNEX 1. – HARDWARE AND SOFTWARE FOR THE IT CENTER OF THE
MINISTRY OF JUSTICE AND OTHER JUSTICE SYSTEM INSTITUTIONS**

**PROJECT „CARDS 2003 – TECHNICAL ASSISTANCE FOR REFORM OF THE
JUDICIAL SYSTEM AND COURT ADMINISTRATION“**

No.	Product	Description	Quantity
1.	Servers	<p>Processor: min 2 x Intel Xeon 3.0 GHz</p> <p>Cache Memory: min Integrated 2M L2 cache per processor</p> <p>Memory: 4GB of 400MHz PC3200 DDR2 SDRAM Memory expandable up to 48GB</p> <p>Network Controller: Integrated dual 10/100/1000</p> <p>Storage Controller: integrated dual channel</p> <p>Storage RAID Controller: 2 channel RAID SCSI Controller with 256MB Cache (RAID levels supported: 1 – 5)</p> <p>Hard Drives: min 5 x 72GB Ultra320 10K rpm HDD</p> <p>Drives Support: Support for up to min 6 hard drives</p> <p>Slots: 6 PCI slots</p> <p>Graphics/Video Controller: Integrated Video Controller</p> <p>Optical: 8x/24x IDE DVD drive</p> <p>Tape Drive: DAT 72 Internal Tape Drive</p> <p>Interfaces: Serial x1, Pointing Device (Mouse) x1, External SCSI x 1 Video x1, Keyboard x1, USB x3, Network RJ-45 (Ethernet) x2</p> <p>Power Supply: Hot-plug with 1 redundant power supply</p> <p>Hot-plug Redundant Fans</p> <p>Operating System: Licensed Microsoft Windows 2003 Server Edition</p> <p>Form Factor: Tower (min 3U), support for Rack System</p> <p>Monitor: 15" CRT Monitor</p> <p>Warranty: 3 years on-site with at least next day response in case of problems</p>	10
2.	Desktop computers	<p>Processor: Min 2.6 GHz with 256KB L2 Cache</p>	500

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No.	Product	Description	Quantity
		Memory: 256MB DDR PC3200 (400MHz), up to 2GB memory support Memory slots: 4 DIMM slots in total Hard Disk Drive: minimum 80-GB Serial ATA 1.5-Gb/s Hard Drive (7200 rpm) 2 serial-ATA connectors for SATA hard drives Optical Drive: Combo DVD / CD RW Graphics/Video card: Integrated Graphics Preinstalled Software: Computer Setup Utility; Diagnostics for Windows; Microsoft Internet Explorer Security: please specify available standard tools (hardware and software) Keyboard: PS/2 2004 Standard Keyboard or USB Mouse: USB 2-Button Optical Mouse Power Supply: min 225W Chassis: Small form factor Audio: Integrated digital audio Network interface: Integrated 10/100/1000 Mbps Interfaces: Rear I/O: 4 USB 2.0, 1 optional serial port, 1 parallel port, 2 PS/2, 1 RJ-45, 1 VGA, audio in/out Expandability & I/O: 1 internal 3.5" bay Operating System: Microsoft Windows XP Professional SP2a, licensed, certified and pre - installed Drivers on web for: Windows 2000; NT; WIN 98; drop-in-box CD for Linux Warranty: 3 years on-site with at least next day response in case of problems	
3.	TFT monitors	15" TFT Monitor (to be the same brand as the Desktop computer) Panel Type 15-inch Active Matrix TFT (thin film transistor) Viewable Image Area (diagonal) 15 in (38.1 cm) Screen Opening (W x H) 12.0 x 9.0 in (30.6 x 23.0 cm) Viewing Angle (typical)* min 115 degrees horizontal / min 100 degrees vertical Brightness (typical)* Up to 250 nits (cd/m2)	500

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No.	Product	Description	Quantity
		Contrast Ratio (typical)* Up to 400:1 Response Rate (typical)* min 23 ms Pixel Pitch 0.297 mm Color Depth Support > 16 million colours Horizontal Frequency 30 to 61 kHz Vertical Frequency 56 to 75 Hz Native Resolution 1024 x 768 @ 60Hz (recommended) Maximum Pixel Clock Speed 80 MHz Certification and Compliance: CE Marking, FCC approval, Energy Star, TCO '99 (emissions, ergonomics, environment), Microsoft® Windows® certified (Microsoft® Windows® 2000 and Microsoft Windows XP), TC Warranty: Three years parts, labour, and on-site service, including backlight	
4.	Win 2003 Server CAL	Client licenses Win 2003 Server for all desktop computers	500
5.	Notebook	Processor: Min 1.4GHz with 400MHz FSB, 1MB L2 Cache Chipset: in accordance with processor type - please specify Memory: 256MB, 333MHz DDR RAM, up to 1GB memory support Hard Disk Drive: min 40GB 5400rpm ATA/100 hard drive Optical Drive: combo DVD ROM / CD RW Video/Graphic card: Integrated Display: 15" diagonal 1024 x 768 XGA TFT 16M colours Modem: 56KB data/fax (with V.8bis and V.80 video support) Network Interface: Integrated 10/100 Ethernet NIC Broadcom 440X with WOL Keyboard: Touch Pad Mouse/Pointing Device: Touch Pad Power supply type: Internal standard Lithium-ion battery Autonomy of battery: min 1 hour PC Card Slots: One Type I/II PC Card slot, 16bit PCMCIA and 32bit CardBus External I/O Ports: VGA, RJ45, 2 x USB 2.0, ext microphone, headphones / line out, DC power	24

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No.	Product	Description	Quantity
		Weight: max 3.1Kg Multimedia: AC Link audio with Speakers and volume control Operating System: Windows XP Professional (SP2), licensed, certified and installed Software: System Recovery Carrying Case: Nylon Backpack Warranty: 3 years	
6.	Принтери	Print technology: Laser printer Print Speed: 18 ppm A4 Resolution: 1200 x 1200 dpi Memory: 8MB RAM Compatibility: Microsoft® Windows 98 SE, Me, 2000, XP 32 bit; Mac OS 10.2 and later Interfaces: Hi-Speed USB 2.0 port Media Input: 250-sheet input tray, 10-sheet priority input tray for specialty paper Output: 150-sheet Media type: Paper, envelopes, transparencies, labels Duty cycle: 8,000 pages per month Box to be completed with: Printer, print cartridge, User Guide, printer documentation and software CD, power cord, 250-sheet input tray, USB cable for connectivity with the PC Warranty: 3 years	240
7.	Network printers	Print Technology: Laser printer Print Speed: 35 ppm A4, with A3 support Resolution: 1200 x 1200 dpi Memory: min 64 MB standard, expandable to min 320 MB Duty cycle: Up to 100,000 pages per month Input capacity: 100-sheet multipurpose tray 1, 250-sheet input tray 2, 500-sheet input tray 3 Output capacity: 250-sheet top output bin Media type: Paper (plain, letterhead, bond), transparencies, labels, envelopes Two-sided printing: automatic	50

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No.	Product	Description	Quantity
		<p>Printer language: PCL 6 or equivalent, PCL 5e or equivalent, postscript level 3 emulation or equivalent</p> <p>Client operating systems: Microsoft® Windows® 98, Me, NT 4.0 (parallel and network connections only), 2000, XP, Server 2003; Apple Mac OS 9.x and later, OS X v10.1 or later; optional: OS/2, UNIX®, Linux®, HP OpenVMS</p> <p>Interfaces : Hi-Speed USB 2.0 port, Fast Ethernet print server</p> <p>Warranty: 3 years</p>	

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ANNEX 2. – DISTRIBUTION OF HARDWARE AND SOFTWARE IN THE JUSTICE SYSTEM INSTITUTIONS

PROJECT „CARDS 2003 – TECHNICAL ASSISTANCE FOR REFORM OF THE JUDICIAL SYSTEM AND THE COURT ADMINISTRATION“

	MINISTRY OF JUSTICE	Desktop computers	Network printers	Printers	Services	Notebook computers
1.	Ministry of Justice	80	6	50		6
2.	It Center of the justice system	20	5	10	10	4
	Total:	100	11	60	10	10

	PENAL INSTITUTIONS	Desktop computers	Network printers	Printers	Services	Notebook computers
1.	Department for enforcement of sanctions ³	5		2		2
2.	Prison Skopje – IDRIZOVO	20	1	8		
3.	Prison Skopje	12	1	6		
4.	Prison VELES	4	1	1		
5.	Prison KR. PALANKA	3		1		
6.	Prison BITOLA	7	1	4		
7.	Prison PRILEP	3		1		
8.	Prison OHRID	6	1	3		
9.	Prison GEVGELIJA	3		1		

³ Во склоп на Министерството за правда

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10.	Prison TETOVO	2	1	2		
11.	Prison STIP	4	1	2		
12.	Prison STRUMICA	2	1	2		
13.	Prison STRUGA	4	1	2		
14.	Correctional home TETOVO	15	1	5		
	Total:	90	10	40		2

	COURTS	Desktop computers	Network printers	Printers	Services	Notebook computers
1.	Supreme court	55	1	3		8
2.	Appellate court Skopje	15	1	7		
3.	Basic Court Skopje 1	22	1	15		
4.	Basic Court Skopje 2	22	1	15		
5.	Basic Court Tetovo	2	1	4		
6.	Basic Court Gostivar	2		2		
7.	Basic Court Debar	1		1		
8.	Basic Court Veles	5				
9.	Basic Court Kavadarci			2		
10.	Basic Court Negotino	2	1	1		
11.	Basic	5	1	3		

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	Court Gevgelija					
12.	Basic Court Kumanovo	8		4		
13.	Basic Court Kratovo	2				
14.	Basic Court Kr. Palanka	3	1	2		
15.	Appellate Court Bitola	6	2	2		
16.	Basic Court Bitola	10		6		
17.	Basic Court Prilep	2	1	2		
18.	Basic Court Krusevo	2		1		
19.	Basic Court Ohrid	5		2		
20.	Basic Court Resen	2		1		
21.	Basic Court Struga	8	1	5		
22.	Basic Court Kicevo	5	1	2		
23.	Appellate Court Stip	8	1	2		
24.	Basic Court Stip	6	1			
25.	Basic Court Sveti Nikole					
26.	Basic Court	6		2		

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	Kocani					
27.	Basic Court Vinica			1		
28.	Basic Court Delcevo			2		
29.	Basic Court Berovo			1		
30.	Basic Court Radovis		1			
31.	Basic Court Strumica	6		2		
	Total:	207	16	90		8

	PUBLIC PROSECUTION	Desktop computers	Network printers	Printers	Services	Notebook computers
1.	Skopje - Republic Prosecution	5	1	2		1
2.	Skopje - High Public Prosecution	0	1	2		1
3.	Skopje - Basic PP	6	1	3		
4.	Tetovo - Basic PP	5	1	3		
5.	Kavadarci - Basic PP	4		2		
6.	Veles - Basic PP	5		2		
7.	Kr. Palanaka - Basic PP	3		2		
8.	Kumanovo - Basic PP	6		3		
9.	Gostivar - Basic PP	5		2		
10.	Gevegelija - Basic PP	4		2		
11.	Debar -	2		1		

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	Basic PP					
12.	Stip - High Public Prosecution	5	1	2		1
13.	Stip - Basic PP	4	1	2		
14.	Kocani - Basic PP	4	1	2		
15.	Strumica - Basic PP	4	1	2		
16.	Delcevo - Basic PP	2		1		
17.	Sv. Nikole - Basic PP	2		1		
18.	Radovis - Basic PP	2	1	1		
20	Berovo - Basic PP	2		1		
21.	Bitola - High Public Prosecution	7	1	2		1
22.	Bitola - Basic PP	9	1	3		
23.	Struga - Basic PP	3		2		
24.	Kicevo - Basic PP	3		2		
25.	Prilep - Basic PP	5	1	2		
26.	Ohrid - Basic PP	4	1	2		
27.	Resen - Basic PP	2		1		
	Total:	103	13	50		4

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ANNEX 3. – MINIMAL SPEEDS OF THE WAN NETWORK PER LOCATION

PROJECT „CARDS 2003 – TECHNICAL ASSISTANCE ТЕХНИЧКА FOR REFORM OF THE JUDICIAL SYSTEM AND COURT ADMINISTRATION“

		Kbps					
		64	128	192	384	512	768
WAN links							
IT Center of the justice system	1					1	
Judicial Council	2	1					
Academy for training of judges and public prosecutors	3		1				
Ministry of Justice	4		1				
Supreme Court	5					1	
Public Prosecution of RM	6	1					
Appellate Court Skopje							
High PP Skopje							
Basic Court Skopje 1	7		1				
Basic Court Skopje 2	8		1				
Basic PP Skopje	9		1				
Basic Court Tetovo	10		1				
Basic PP Tetovo							
Basic Court Gostivar	11		1				
Basic PP Gostivar							
Basic Court Debar	12	1					
Basic PP Debar							
Basic Court Kumanovo	13		1				
Basic PP Kumanovo							
Basic Court Kriva Palanka	14		1				
Basic PP Kriva Palanka							
Basic Court Kratovo	15	1					
Basic Court Veles	16		1				
Basic PP veles							
Basic Court Negotino	17	1					

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		Kbps					
		64	128	192	384	512	768
Basic Court Kavadarci	18	1					
Basic PP Kavadarci	19	1					
Basic Court Gevgelija	20	1					
Basic PP Gevgelija							
Appellate Court Stip	21				1		
High PP Stip							
Basic Court Stip	22		1				
Basic PP Stip							
Basic Court Sveti Nikole	23	1					
Basic PP Sveti Nikole							
Basic Court Radovis	24		1				
Basic PP Radovis							
Basic Court Strumica	25		1				
Basic PP Strumica							
Basic Court Kocani	26		1				
Basic PP Kocani							
Basic Court Vinica	27	1					
Basic Court BeroVo	28		1				
Basic PP BeroVo							
Basic Court Delcevo	29		1				
Basic PP Delcevo							
Appellate court Bitola	30				1		
High PP Bitola							
Basic PP Bitola							
Basic Court Bitola	31		1				
Basic Court Prilep	32		1				
Basic PP Prilep							
Basic Court Krusevo	33	1					
Basic Court Resen	34	1					
Basic PP Resen							
Basic Court Ohrid	35		1				
Basic PP Ohrid							
Basic Court Struga	36		1				

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		Kbps					
		64	128	192	384	512	768
Basic PP Struga							
Basic Court Kicevo	37		1				
Basic PP Kicevo							
Prison IDRIZOVO	38	1					
Prison SKOPJE	39	1					
Prison VELES	40	1					
Prison KRIVA PALANKA	41	1					
Prison BITOLA	42	1					
Prison PRILEP	43	1					
Prison OHRID	44	1					
Prison GEVGELIJA	45	1					
Prison TETOVO	46	1					
Prison STIP	47	1					
Prison STRUMICA	48	1					
Prison STRUGA	49	1					
Correctional Home TETOVO	50	1					
Total:		25	21		2	2	